



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SK

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/556,815	04/21/00	SPENCE J	PK-US005084

022919 PM82/0706
SHINJYU GLOBAL IP COUNSELORS, LLP
1233 20TH STREET, NW, SUITE 700
WASHINGTON DC 20036-2680

EXAMINER

PEAVEY, E

ART UNIT	PAPER NUMBER
----------	--------------

3626

DATE MAILED: 07/06/01

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/556,815

Applicant(s)

SPENCE ET AL.

Examiner

Enoch E Peavey

Art Unit

3626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Creavey, US No. 3,033,582. Creavey discloses a metallic seal comprising a first annular beam section (11) having a first non-sealing surface (26) and a first raised portion (28) facing in a first axial direction to contact a first member (19) for creating a first annular sealing dam therebetween. There is a second annular beam section (opposite 28) having a second non-sealing surface (opposite 26) and a first raised portion (opposite 28) facing in a first axial direction to contact a second member (18) for creating a second annular sealing dam therebetween. There is an annular passage extending between the first and second sealing surfaces (FIG. 3). There is an annular outer surface (12) extending between the first (28) and second (opposite 28) sealing surfaces and spaced from the annular inner surface to form an annular column section (approximate width of 12) of material extending substantially perpendicular between the first and second annular beam sections (FIG. 3). One of the annular inner and outer surfaces have an annular

Art Unit: 3626

recess extending in a substantially radial direction to at least partly define an effective minimum width of the annular column section (FIG. 3).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al, US No. 6,042,121 in view of Waite, US No. 3,012,802. Ma discloses a metallic seal comprising a first annular beam section having a first sealing surface facing in a first axial direction to contact a first member for creating a first annular sealing dam therebetween. There is a second annular beam section having a surface facing in a first axial direction to contact a second member for creating a second annular sealing dam therebetween. There is an annular passage extending between the first and second sealing surfaces. There is an annular outer surface extending between the first and second sealing surfaces and spaced from the annular inner surface to form an annular column section of material extending substantially perpendicular between the first and second annular beam sections. One of the annular inner and outer surfaces have an annular recess extending in a substantially radial direction to at least partly define an effective minimum width of the annular column section. The annular recess

Art Unit: 3626

is configured to form a first diagonal brace section extending from annular column section to the first beam section (Ma, claim 1). The column and beam sections are integrally constructed from a one-piece unitary member (Ma, claim 7). The effective minimum width of the column section lies within the range of approximately .008 to .03 inches (Ma, claim 2). The column section has its axial height between the sealing surfaces at least as high as the effective minimum width (Ma, claim 10). The height of the column is at least three times as long as the minimum width of the column section (Ma, claim 11). The first brace section extends from the column section at an angle of approximately 35 to approximately 55 degrees (Ma, claim 18). The annular column section has an axial height lying between approximately .02 to 1.0 inches (Ma, claim 15). There is a second diagonal brace section extends from the annular column section to the second beam section. The first and second brace sections meet approximately midway between the annular sealing surfaces (Ma, claim 17). The annular recess is located closer to one of the first and second annular sealing surfaces (FIG. 19). The annular recess may be formed on the annular inner or outer surfaces (Maa, claims 22, 23). The first and second sealing surfaces are located axially over the annular column (FIG. 8). The seal is formed of a corrosion resistant alloy selected from nickel, aluminum and stainless steel. Ma does not *a first and second raised portion having sealing surfaces contacting the first and second members*. Waite teaches this arrangement in order to improve compressibility and sealing characteristic of the seal. It would have been obvious to one of ordinary skill in the art at the time of applicant's

Art Unit: 3626

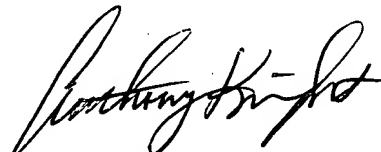
invention to modify Ma as taught by Waite in order to provide the metallic ring with improved compressibility and sealing characteristics.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Enoch E Peavey whose telephone number is 305 1977. The examiner can normally be reached on Mon-Fri 8:00 am to 4:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (703) 308- 3179. The fax phone numbers for the organization where this application or proceeding is assigned are 305 3597 for regular communications and 305 3597 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 1113.

Enoch E Peavey
Art Unit 3626
June 25, 2001


Anthony Knight
Supervisor, Patent Examiner
Group 3600